FINDING OF NO SIGNIFICANT IMPACT (FONSI)
Cuyahoga Valley National Park
Boston Mills Historic District Sanitary Sewer Collection and Treatment System

The National Park System preserves outstanding representatives of the best of America's natural, cultural, and recreational resources of national significance. These resources constitute a significant part of the American heritage, its character, and future. Along with similar resources of local, state, tribal, and national significance administered by other public and private organizations and supported by National Park Service (NPS) technical assistance and grant funding, Cuyahoga Valley National Park (CVNP) is a vital part of America's system of parks and other preserved resources.

Two historic districts are located within the legislative boundary of CVNP, Everett and Boston Mills. Of the two, Boston Mills encompasses not only the historic and cultural resources the Park was created to preserve and protect but also recreational and natural resources vital to the Park and the surrounding community. Boston Mills was established on the banks of the Cuyahoga River, the Park's most significant natural resource. It is also adjacent to the historic Ohio & Erie Canal Towpath Trail and Valley Railway which makes it a popular stop for visitors of CVNP.

The Cuyahoga River and its tributaries have benefited from extensive recovery efforts over the last 40 years. Upgrades of municipal wastewater treatment plants, implementation of combined sewer overflow long term control plans, improved municipal industrial pretreatment programs and decreases in industrial point source loadings have greatly reduced the amounts and types of pollutants entering the river and its tributaries. Significant documented improvements in water quality and biological performance are now apparent including the number of fish species increasing dramatically over the past 40 years.

Even with improvements in water quality, the Cuyahoga River within CVNP is often unacceptable for recreational use due to the high concentrations of *Escherichia coli* (*E. coli*), a fecal-indicator bacterium which is present in untreated wastewater. The Ohio Environmental Protection Agency (Ohio EPA) identified failing septic systems, mainly on tributaries as a main non-point source of pollution for this section of the river.

The Boston Mills Historic District is listed in the National Register of Historic Places as a significant, intact example of a century canal village and for its concentration of intact 19th century architecture. Like much of the Cuyahoga River Valley, the District and surrounding area has a prehistoric occupation history that spans over 10,000 years. Several prehistoric sites have been recorded within the community over the past 30+ years. Boston was settled by Euro-Americans, many of whom came from Connecticut and other locations on the east coast of the U.S., very early in the 19th century. This use began at a shallow area on the Cuyahoga River that served as a landing place during the first decade of the 1800s for settlers attempting to travel overland to their newly acquired parcels to the east in the former Connecticut Western Reserve.

By the 1820s era, multiple structures were present in the community, and by the middle 1830s considerable commercial activity and residential use are documented. A plat from the 1850s era depicts numerous houses and commercial buildings in the core of the community. A few of the early buildings remain (such as the Boston Store from the circa 1835 era), while many others are no longer extant. Archeological deposits have been recorded in association with extant and non-extant building locations. Given this early and extensive settlement history, the archeological record at Boston is understandably complex.

The NPS has made substantial investments in numerous historic buildings over the last 20 years to ensure their continued preservation and compatible use. The current uses include a visitor center, overnight accommodations, special event rental space, and offices for NPS staff, partners, and volunteers. Currently, only three of the eleven buildings owned by the NPS are serviced by fully functioning sanitary systems, while other systems have been identified for replacement within the next five years. Due to land ownership constraints and archeology concerns, several buildings would not be able to have existing sanitary systems replaced on site and therefore would no longer be habitable. As maintaining and upgrading utilities in these structures constitutes an essential part of the preservation of the park's cultural and environmental resources, it is necessary that steps be taken to develop a permanent solution for providing sanitary services for these structures. Thus, maintaining occupied buildings to allow for continued use by providing required sanitary services is critical to preserving the historic character of the Boston Mills Historic District.

The NPS has prepared an environmental assessment (EA) to analyze any potential impacts resulting from each of the identified alternatives for providing sanitary services. The EA was available for public review from January 15, 2010 until February 8, 2010 in the NPS Planning Environment and Public Comment (PEPC) system online and at park headquarters. The EA analyzed three alternatives: Alternative 1 – No Action Alternative; Alternative 2 – Subsurface Drip Irrigation Treatment System; and Alternative 3- Constructed Wetlands Treatment System (NPS Preferred). The EA was prepared pursuant to the Council on Environmental Quality's regulations for implementing the National Historic Preservation Act (NEPA) (40 CFR 1500 et seq.), 42 U.S.C. 4332(2), Director's Order #12: Conservation Planning, Environmental Impact Analysis, and Decision-making Handbook (2001) (DO-12).

SELECTED ALTERNATIVE

Based on the analysis in the EA, the NPS has selected Alternative 3 – Constructed Wetland Treatment System. Under the Selected Alternative, a sanitary sewerage collection system will be constructed to convey all wastewater generated from NPS owned buildings to a constructed wetlands. Such a system can provide an alternative to conventional wastewater treatment and they have been used for water quality improvement in the United States since the 1970s. At least 600 constructed wetland treatment systems are currently treating municipal, industrial, and agricultural wastewater in North America.

- Alternative 3 consists of the combination of solids removal in existing septic tanks, a subsurface flow wetland and a surface flow wetland.

The initial phase of primary treatment of the influent would be completed in the existing septic tanks. The purpose of the primary treatment is to remove settling and floating solids, which could potentially accumulate and clog the wetland entry zone. Once solids have been separated from the wastewater, it is conveyed to a subsurface flow wetland for secondary treatment. The purpose of the secondary treatment is to remove biological oxygen demand (BOD) and other suspended solids. Upon receiving the pre-treated wastewater, settled colloidal BOD is removed through aerobic/anaerobic decomposition. The remaining colloidal and dissolved BOD is later removed as the wastewater comes in contact with microbes inhabiting the wetland. Once the desired secondary effluent standards have been achieved, treatment will proceed to the final phase, a surface flow wetland. The final phase will allow for further biological treatment of the effluent, as well as disposal through evapotranspiration/infiltration. Preliminary sizing calculations indicate that a total of approximately four acres of land would be necessary for the surface and subsurface wetlands. The required septic tank design capacity is approximately 15,000 gallons, which is 1.5 times the design flow of the system, as required by the Ohio EPA.

Operation of the wetland treatment system would occur once the plants contained in the subsurface flow and surface flow wetlands have been established, so that treatment goals can be achieved. To ensure proper operation and maintenance of the system, an operation and maintenance plan would be prepared. Operation and maintenance issues associated with the installation of a constructed treatment wetland system include monitoring of influent and effluent water quality, water level monitoring, vegetation management, and odor control.

A state regulatory requirement that will apply to a constructed wetland system is the submittal of a Permit to Install (PTI) application to Ohio EPA, which will allow for the construction and operation of the constructed treatment wetlands as a wastewater treatment plant.

OTHER ALTERNATIVES CONSIDERED

Alternative 1 - No Action Alternative, would involve allowing the existing systems to fail with subsequent vacating of the associated structure if a replacement of the on-site treatment system is not feasible or permitted. Most systems could not be replaced due to land constraints and archeologically concerns. New systems that could be replaced at individual properties would most likely be mound systems due to current state regulations.

Under Alternative 2- Subsurface Drip Irrigation Treatment System, a sanitary sewerage collection system would be constructed to convey all wastewater generated from NPS owned buildings same as with Alternative 3. However, the treatment system would be a Subsurface Drip Irrigation System (SSDI) instead of constructed wetlands. These systems are efficient methods for recycling/disposing of wastewater on-site. SSDI systems receive highly treated wastewater and slowly disperse the wastewater into plants' root zone by pressure distribution through a system of tubing installed below the ground surface.

The proposed SSDI system consists of the following components:

- Septic tank,
- Secondary treatment (i.e. package plant),
- Filtering device,

- Storage tank,
- Pump tank, and
- Drip distribution system.

Wastewater introduced into a drip distribution system must be pretreated due to public health concerns, as well as to prevent clogging in the system. The initial phase of treatment, or primary treatment, would be completed in existing septic tanks, where suspended solids and grease are separated from the wastewater. Following primary treatment, wastewater must undergo secondary treatment in order to achieve a reduction in biological oxygen demand (BOD) and fecal coliform levels. In order to keep the SSDI system underground, a small package plant is proposed for secondary treatment.

ENVIRONMENTALLY PREFERABLE ALTERNATIVE

The environmentally preferable alternative is the alternative that causes the least damage to the biological and physical environment and best protects, preserves, and enhances historic, cultural, and natural resources. When identifying the environmentally preferable alternative, economic, recreational, and technical issues are not considered. The environmentally preferable alternative is the alternative that will promote the national environmental policy expressed in NEPA (Section 101(b)) as the alternative that will help the Nation:

1. fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;

2. assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings;

3. attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;

4. preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity, and variety of individual choice;

5. achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and

6. enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

The Selected Alternative best fulfills the responsibility of this generation as trustee of the environment for succeeding generations. This is based primarily on goals of this alternative to provide for perpetual use and preservation of the Boston Mills Historic District and surrounding structures while aiding in the continued improvement of water quality in the Cuyahoga River Watershed.

The Selected Alternative fulfills the second objective by maximizing the assurance of safety, health, productivity and culturally pleasing surroundings. Upon completion of construction, the constructed wetlands fulfills the need for safe and effective treatment of all wastewater generated by NPS owned buildings within the project limits without undesirable consequences.

The Selected Alternative fulfills the third objective by aspiring to the widest range of beneficial uses of the environment without degradation or risk to health and safety. The Selected Alternative resolves the issues of wastewater treatment while preserving and enhancing the beneficial uses of the Historic District and surrounding buildings.

The Selected Alternative fulfills the fourth objective by preserving important historic, cultural, and natural aspects of our national heritage by ensuring the preservation of the historic structures, archeological resources and the water resources.

The Selected Alternative achieves a balance between population and resource use by allowing use of the park's resources while not contributing to the degradation of the Cuyahoga Watershed or health and safety of visitors, employees, and residents.

Alternative 1 - No Action Alternative would utilize the fewest depletable resources of the two alternatives, as minimal resources would be utilized since only a small portion of the existing systems would be replaced.

The Selected Alternative, Alternative 3- Constructed Wetland Treatment System, is considered the environmentally preferable alternative, as it meets five of the six NEPA objectives.

WHY THE SELECTED ALTERNATIVE WILL NOT HAVE A SIGNIFICANT EFFECT ON THE HUMAN ENVIRONMENT

As defined in 40 CFR §1508.27, significance is determined by examining the following criteria:

Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.

The Selected Alternative would have minor long-term adverse impacts to archeological resources due to the presence of some artifacts in a disturbed context being present on at one of the properties. There is also a possibility of minor long-term cumulative impacts if the system were to become a public utility and additional sewers were installed throughout the community. However, there also benefits to the archeological resources as they would be protected in situ with little possibility of disturbance since the system would provide for permanent collection of the wastewater from all NPS owned structures

Construction activities would have negligible short-term direct adverse impacts to the cultural landscapes. Additional minor long-term direct adverse impacts would result from the presence of system components which, due to the size, location and widespread use in modern society, will not detract from the overall character of the historic landscape scene. Indirect long-term minor benefits to the cultural landscape will be realized with the permanent removal of

components of the existing system servicing Boston Store Visitor Center and the George Stanford House. These include a mounded sand filter, control panels and vent pipes. Additionally, the new system would ensure the continued use and preservation of the historic structures associated with the cultural landscape. These benefits are also cumulative to the Historic District.

The health and safety of nearby residents, park visitors, and employees will be impacted directly and cumulatively due to long-term moderate to major benefits. The system will provide a permanent solution for wastewater treatment for the NPS owned buildings that it services. Potential direct and indirect negligible adverse impacts may occur if the system fails as a result of improper installation or maintenance. This is unlikely due to the state regulations for installation and operation of the system.

The Selected Alternative will result in direct minor short-term adverse impacts to the Visitor Experience in the Boston Mills Historic District during construction. Indirect negligible adverse impacts may occur if the system is not maintained and offensive odors are emitted from the system. Overall, there will be minor long-term cumulative benefits to the visitor experience attributed to the continued preservation and enhanced use of the area.

Direct negligible short-term impacts to water quality will occur during construction of the Selected Alternative. There will also be benefits that are long-term minor direct, indirect and cumulative to water quality since the project will be improving wastewater treatment for the Boston Mills Historic District and surrounding area.

The Selected Alternative will have a minor, long-term, adverse effect that would not impair grassland and forest vegetation, while also having a minor, long-term, beneficial effect on wetlands and the control of invasive plants in the project area and at CVNP.

The degree to which the proposed action affects public health or safety.

The Selected Alternative will have moderate to major beneficial impacts since it will result in a system that will provide a permanent solution for wastewater treatment for the NPS owned buildings that it services. Numerous on-site wastewater treatment systems will be combined into the constructed wetlands which would be designed to modern standards and monitored on a regular basis by licensed wastewater operators. The potential for human contact with untreated wastewater will be eliminated at the individual structures. Additionally the contribution of harmful pollutants in the Cuyahoga Watershed will be eliminated.

Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.

The Boston Mills Historic District is listed in the National Register of Historic Places along with the George Stanford House and Clayton Stanford House which are all included in the scope of the project. The selected alternative facilitates these structures continued preservation through compatible use. In correspondence dated February 10, 2010, the Ohio State Historic

Preservation Office concurred that the Selected Alternative would have no adverse effects on properties eligible for or listed in the National Register of Historic Places.

The federally endangered Indiana bat (*Myotis sodalis*) was found within CVNP boundaries in July 2002, the first instance of that species ever recorded in the Park. This documented bat location is approximately six miles north of the proposed project area. If tree removal becomes necessary the U.S. Fish and Wildlife Service has requested further coordination to evaluate the potential for impacts to Indiana bats or their habitats.

There are no prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas known to be in the project area.

The degree to which the effects on the quality of the human environment is likely to be highly controversial.

Implementation of the project will not result in controversial effects on the human environment. No comments received during public review indicate any such controversy.

The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.

There are no identified risks associated with the Selected Alternative that are unique or unknown, and there are no effects associated with the Selected Alternative that are highly uncertain that were identified during the analysis for the EA or during the public review of the EA.

The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.

The Selected Alternative does not establish a precedent for any future actions that may have significant effects, nor does it represent decisions about future considerations. The purpose of the project is limited to a cluster of structures in and around the Boston Mills Historic District.

Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.

The EA included an evaluation of the potential for cumulative impacts for each impact topic. There are no other actions with individually insignificant and cumulative significant impacts. The Selected Alternative would result in long-term beneficial impacts for historic structures/buildings, cultural landscapes, health and safety, visitor experience, and water resources.

The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.

Archeological resources eligible for listing in the National Register of Historic Places may be adversely affected during construction activities. Extensive planning efforts have identified previously disturbed corridors for all new development components resulting in the potential for only minor impacts. In correspondence dated February 10, 2010, the Ohio State Historic Preservation Office concurred that the Selected Alternative would have no adverse effects on properties eligible for or listed in the National Register of Historic Places.

The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.

The federally endangered Indiana bat (*Myotis sodalis*) was found within CVNP boundaries in July 2002, the first instance of that species ever recorded in the Park. This documented bat location is approximately six miles north of the proposed project area. None of the alternatives included proposed tree removals so this issue was not addressed in the EA. The NPS has made a determination of no effect on federally-listed species or critical habitat under the Endangered Species Act of 1973, as amended. In correspondence dated February 19, 2010, the USFWS concurred with the Park's approach and conclusion. If tree removal is determined to be necessary, further coordination with USFWS will be required to evaluate potential impacts to Indiana bats or their habitats as requested in correspondence dated August 20, 2009.

Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

This action violates no Federal, State, or local environmental protection laws.

PUBLIC INVOLVEMENT

External scoping was conducted with federal, state, and local agencies, along with solicitation for public comment in the region surrounding CVNP. Scoping letters were distributed to federal, state, and local agencies on October 19, 2004 and again on July 17, 2009. The July 2009 letter was also sent to private residents of Boston Township who reside within close proximity to the project. A public open house was held on August 11, 2009 and attended by 10 individuals, mostly private property owners from the surrounding community. The request for public comment and project description was posted on the park's Planning, Environment and Public Comment (PEPC) website at http://parkplanning.nps.gov/ from July 17, 2009 to August 20, 2009.

Ten comments were received and incorporated into the document. Nine comments were from other agencies and one from a private resident who lives adjacent to park property. Comments from agencies were mostly supportive of the proposed actions and had a few suggestions for issues to be addressed. The one private resident raised issues pertaining to health and safety of

his private drinking well, noise, odor and aesthetics all of which were then addressed in various sections of the EA.

The EA was available for public review from January 25, 2010 to February 8, 2010 in the NPS Planning Environment and Public Comment (PEPC) system online and at park headquarters. A notice was also published in the Cleveland Plain Dealer on January 21, 2010 and the Akron Beacon Journal on January 27, 2010. Seven comments were received none of which resulted in changes to the alternatives or the impacts. No additional analysis or modifications to the Proposed Action were made based on the comments received. NPS's responses are provided in an errata sheet attached to this FONSI.

IMPAIRMENT

In addition to reviewing the list of significant criteria, the NPS has determined that implementation of the proposal will not constitute an impairment to the critical resources and values of the Park. This conclusion is based on a thorough analysis of the environmental impacts described in the EA, public comments, relevant scientific studies, and the professional judgment of the decision-maker guided by the direction in NPS Management Policies 2006. The plan under the Selected Alternative will not result in any adverse impacts to Park resources. Overall, the plan results in benefits to Park resources and values, opportunities for their enjoyment, and it does not result in their impairment.

CONCLUSION

The Selected Alternative does not constitute an action that normally requires preparation of an EIS. The Preferred Alternative will not have a significant effect on the human or natural environment. There will be no significant impacts on public health, public safety, threatened or endangered species, sites or districts listed in or eligible for the National Register of Historic Places, or other unique characteristics of the region. No highly uncertain or controversial impacts, unique or unknown risks, significant cumulative effects, or elements of precedence were identified. Implementation of the actions will not violate any Federal, State, or local environmental protection law.

Based on the aforementioned, it has been determined that an EIS is not required for this project and thus will not be prepared.

Recommended: _____ 2/22/10
Paul Stoehr, Acting Superintendent Date

Approved: _____ 2/25/10
David Given, Midwest Regional Director Date
Actg